pittsburgh glass products

That this is the "glass age" is impressively exemplified by the many ways in which Pittsburgh Glass was utilized in the Connecticut General Life Insurance Company Building. SPANDRELITE® was used in the curtain-wall spandrel. Openings feature SOLEX® and TWINDOW® for greater interior comfort. And Pittsburgh's Rough Plate Glass, Heavy Plate Glass, HERCULITE®, PITTCOMATIC® Automatic Door Openers, Paints, PC FOAMGLAS® and Copper Back Mirrors complete a truly "all-glass" structure. Architects: Skidmore, Owings & Merrill, New York City; General Contractor: Turner Construction Company, New York City.

A.I.A. FILE NO. 26-A-2—1960

Pittsburgh Plate Glass Company

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in this catalog...

you will find illustrated and described the major glass products of the Pittsburgh Plate Glass Company. For the greatest convenience to you, each of the products is clearly identified and, so far as possible, kept separated by pages or segments of a page.

In addition to a number of diagrams and sketches, which serve to underscore various features of the products discussed, you will find photographs of actual installations. The latter, we believe, will offer you typical examples of the ability of the particular Pittsburgh Glass product to complement and enrich practically any architectural scheme.

For more detailed information, we suggest that you refer to the specific Sweet's Catalog Files mentioned under the various categories in this catalog. Also, we shall be pleased to have you consult with the *Pittsburgh* Architectural Representative or branch office nearest you, or you may address any inquiry direct to Pittsburgh Plate Glass Company, 632 Fort Duquesne Boulevard, Pittsburgh 22, Pennsylvania.

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check list of pittsburgh glass products

PRODUCT	QUALITIES	THICKNESSES	RECOMMENDED MAX. SIZES		WEIGHTS PER SQ. FT.	STRENGTH	COLORS	FINISH
Regular Polished Plate Glass †	Silvering Mirror Glazing Glazing	⅛" ¼"	Standard ⅛" 76"x128" (Over 7 sq. ft. not recommended for ext. glazing) ¼" 130"x218"	Special 130"x286"	⅛" 1.64 lbs. ¼" 3.29 lbs.	Tension 6500 lbs. (") Compression 36,000 lbs. (") Modulus Elasticity 10,000,000 lbs. (")	Clear	Ground and Polished
Polished Heavy Plate Glass †	Commercial Selected	5/16" ⅜" ½" ¾" 1" 1¼"	5/16" 130"x218" ⅜" 130"x218" ½" 130"x218" ¾" 94"x130" 1" 74"x148" 1¼" 74"x148"	130"x286" 130"x286" Contact PPG	5/16" 4.06 lbs. ⅜" 4.93 lbs. ½" 6.58 lbs. ¾" 9.67 lbs. 9.67 lbs. 1" 13.16 lbs. 1¼" 16.45 lbs.	In direct proportion to the square of the thickness	Clear	Ground and Polished
Solex® Heat-Absorbing Plate Glass †	Glazing only	¼" ⅜"	¼" 128"x216" ⅜" 126"x214"	130"x286" 130"x286"	3.29 lbs.	Same as regular Plate Glass	Bluish Green	Ground and Polished
Solargray® Plate Glass †	Glazing	¼" ⅜"	¼" 128"x216" ⅜" 126"x214"	130"x286" 130"x286"	3.29 lbs.	Same as regular Plate Glass	Gray	Ground and Polished
Twindow®—Metal Edge	Plate Glass—Glazing Window Glass—"A" Rolled Glass—Standard	Double-Glazed Unit: Glass— ⅛", 3/16", ¼" Air Space ¼" or ½"	Double-Glazed Unit: ⅛"—12 sq. ft. 3/16"—22 sq. ft. ¼"—70 sq. ft. 50 sq. ft. (Solex) 50 sq. ft. (Solargray)		Double-Glazed Unit: ⅛"—3½ lbs. ¼"—7 lbs.	Write for details	Dependent on glass used	Same as glass used
Twindow—Glass Edge	DSA Pennvernon® Window Glass	Double-Glazed Unit: 3/16" air space ⅛" glass 7/16" over-all	12 sq. ft.		3½ lbs.		Clear	Fire-finished
Duplate® Safety Plate Glass Solex or Clear		¼"	60x90		3.19 lbs.	Write for details	Bluish Green Clear	Ground and Polished
Duolite® Safety Sheet Glass Solex or Clear		SS & SS 7/32" Standard 15/64" DS & DS 17/64"	36x60 or sizes not to exceed 15 sq. ft.		2.42 lbs. 2.86 lbs. 3.24 lbs.	Write for details	Bluish Green Clear	Fire-finished
Multiplate Bullet-Resisting Plate Glass		¾" ⅞" 1" 1 3/16" 1 9/16" 1¾" 2" 2½" 3"	60x90		9.71 lbs. 11.36 lbs. 13.01 lbs. 14.88 lbs. 20.04 lbs. 22.45 lbs. 27.97 lbs. 33.03 lbs. 39.63 lbs.	Write for details	Bluish Green Clear	Ground and Polished
Herculite® Plate Glass	Same as glass before tempering	¼" ⅜", ½", ¾" 1", 1¼"	¼"—72x108 ⅜", ½", ¾"—77x110 1", 1¼"—74x110		Same as glass before tempering	Approx. 4 times that of glass of equal thickness which has not been tempered	Same as glass before tempering	Same as glass before tempering
Herculite Doors	Selected	¾" Doors ¾" Sidelights ½" Doors ½" Sidelights	48x108 72x108 42x96 72x108		Avg. 9.67 lbs. (or 6.5 lbs.) plus hardware	Approx. 4 times that of glass which has not been tempered	Clear	Ground and Polished
Carrara® Structural Glass	Selected	Black, White 11/32", 7/16", ¾", ⅞", 1¼" Black also in ¼" Ivory, Gray, Tranquil Green 11/32", 7/16", ⅞", 1¼" Forest Green, Dusk Blue, Wine, Rembrandt Blue, Shell Pink 11/32" only	77x130		¼" 3.29 lbs. 11/32" 4.5 lbs. 7/16" 5.76 lbs. ¾" 9.87 lbs.	Approx. same as regular Plate Glass	Tranquil Green, Ivory, White, Black, Wine, Dusk Blue, Rembrandt Blue, Gray, Shell Pink and Forest Green (All Opaque)	Ground and Polished one side. ¼" black, also polished both sides
Pittsburgh Mirrors Regular Copper Back Structural	Silvering Mirror Glazing	Fabricated from any thickness of glass	Copper Back and Structural 74x140		Approx. same as Plate Glass	Approx. same as Plate Glass	Plain, Bluish Green	Silver, gold or gunmetal backing
Tapestry® Glass		7/32"	60x144		2.89 lbs.	Equal to or greater than that of regular Plate Glass	Translucent Semi-Opaque	Plain Polished
Rough Plate Glass †		21/64" ½" ⅝" ⅞" 1⅛" 1⅜"	Standard 21/64" 130"x218" ½" 130"x218" ⅝" 130"x218" ⅞" 94"x130" 1⅛" 74"x148" 1⅜" 74"x148"	Special 130"x286" 130"x286" 130"x286" Contact PPG	Approx. same as Plate Glass	Approx. same as Plate Glass	Translucent	Plain
Pennvernon® Window Glass	Photo A, B Picture A, B Single Strength Same Dbl. Strength Same 3/16" Heavy Sheet A, B 7/32" Heavy Sheet A, B Solex 7/32" Greenhouse	.058" to .068" 1/16" (.070" to .080") 3/32" (.087" to .095") ⅛" (.118" to .133") 3/16" (.187" to .200") 7/32" (.212" to .225") 7/32" (.212" to .225") ⅛" (.118" to .133")	3'0"x4'2" 3'0"x4'2" 3'4"x4'2" 5'0"x6'8" 10'0"x6'4" 10'0"x6'4" 50 sq. ft. 16x18, 16x24, 18x20. 20x24		12 to 14 oz. 16 19 26 40 45 45 26	Substantially the same as Plate Glass of equal thickness	Clear Bluish Green	Fire-finished
Pennvernon Graylite Glass	Graylite "61" Heavy Sheet Graylite "56" Heavy Sheet Graylite "31" Window Glass Graylite "14" Heavy Sheet	3/16" 7/32" ⅛" 7/32"	120"x84" 120"x84" 60"x84" 60"x84"		40 oz. 45 oz. 26 oz. 45 oz.	Substantially the same as Plate Glass of equal thickness	Neutral	Fire-finished
Spandrelite®		Dependent upon surface finish	72" x 144"		Dependent upon thickness of glass used	Approx. 2 times that of glass of equal thickness that has not been heat strengthened	Sixteen Standard Colors Ranging from Horizon to Graphite. Special Colors on approved request. (All Opaque)	Polished and Twill
PC Glass Blocks*	Selected	3⅞" (hollow)	Actual sizes: **5¾"x5¾" **7¾"x7¾" 11¾"x11¾" **3¾"x11¾"				Clear, **Available in twelve Standard Colors	Moulded
Foamglas®*	Rigid, lightweight, incombustible, long-lasting, cellular glass insulation	1¾" 2" 2½" 3" 4"	12"x18" 12"x18" 18"x24" 18"x24" 18"x24"		9 lbs. per cu. ft.	Send for Foamglas® Booklet		

*Manufactured by Pittsburgh Corning Corporation. Distributed by Pittsburgh Plate Glass Company.

†Untrimmed—factory edge.

regular polished plate glass

Regular Plate Glass is transparent, flat glass having plane-polished surfaces. It is made by casting and rolling large sheets which are then ground and polished to true, flat surfaces having great brilliance and high reflectivity. Since the two surfaces of the glass form true and parallel planes, Plate Glass affords undistorted vision or reflection from any angle. Plate Glass is the finest material available for exterior and interior glazing. It is ideal for commercial, industrial and public buildings, heightening their architectural beauty and adding that distinctive touch which increases the sales and rental value of the structure.

Polished Plate Glass was used in these large areas on the first floor loan section of the Union Federal Savings & Loan Association, Baton Rouge, Louisiana. Here a wall of Plate Glass brings in the outside with its interesting patio. Architect: A. Hays Town, Baton Rouge, Louisiana.

This Plate Glass is available in three qualities: *Silvering* Quality, *Mirror Glazing* Quality and *Glazing* Quality. It should be evident that small lights of Plate Glass can be selected to have fewer imperfections than larger lights. For this reason the grading specifications are less stringent as the size of the sheet increases.

Silvering Quality is invariably used where the highest standard is required. This Quality is rarely recommended for glazing purposes in sizes of more than 20 square feet.

Mirror Glazing Quality may be specified where absolute perfection is not required. It is exceptionally free from defects.

Glazing Quality represents the usual selection of Plate Glass which is specified where the ordinary glazing installation is required. (*Not* for Mirrors.)

Pittsburgh Polished Plate Glass is available in a superior *Twin-Ground* Plate Glass made by a special new twin-grinding process at the newest and most modern glass plant in the world.

See "Check List" on page 3 for additional information on Regular Plate Glass.

heavy polished plate glass

Its strength, true flat surfaces, great brilliance and high reflectivity, together with its clarity which affords excellent vision, make Heavy Plate Glass adaptable to many uses. In commercial, industrial and public buildings, it has proved its value where wind loads and sound reduction are a problem. In addition to utilization in large, unobstructed exposures, Heavy Plate Glass is widely used for book shelves, decorative panels, partitions, shower bath skylights, telephone stall partitions, theater marquees, valances, lighting fixtures, radio sound control rooms, refrigerator doors, showcase tops, soda fountain counters and many similar applications.

Heavy Plate Glass is the designation given Plate Glass in thicknesses of 5/16″ to 1¼″. Normally, it is furnished in "Commercial Quality" only. However, it may be especially selected to meet some specific purpose. For detailed specifications, see "Check List" on page 3.

In this new building of the American Can Company, Lemoyne, Pa., Pittsburgh's Heavy Plate Glass is used in the areas surrounding the HERCULITE® Doors. This is one of the most prominent uses of this type of glass, for it has exceptional strength and affords utmost clarity of vision. Note the mitered lines in this Heavy Plate Glass. Architects: Engineering Department, American Can Company; General Contractor: Turner Construction Company, New York City.

wind resistance chart

	Maximum glass sizes** of various thicknesses for glazing vertical windows supported on four sides SQUARE FEET OF AREA									
Glass Thickness	†† SS-.087"	†† DS-.118"	⅛"	3/16"	¼"	5/16"	⅜"	½"	⅝" up to 1"	1¼"
30 Mile Wind	35 sq. ft.†	64.5†	72†	162	*198	*198				
40 Mile Wind	17.5†	32.25	36†	81	144	*198	*240			
55 Mile Wind	11.6	21.5†	24†	54	96	150	216			
65 Mile Wind	8.7	16.1†	18†	41	72	112	162	*240		
80 Mile Wind	5.8	10.85	12	27	48	75	108	192		
100 Mile Wind	3.5	6.45	7	16	29	45	65	115		
120 Mile Wind	2.5	4.6	5	11	20	32	46	82	*80	*74

†"SS," "DS" and ⅛" glass, because of flexibility, should never be used in areas exceeding 12 square feet, and for the sake of appearance, areas used should not exceed 7 square feet.

*Maximum Size Available.

**These sizes are based on practical experience and are entirely adequate. They should not be referred to the "Chart of Safe Loads for Plate Glass" since in actual use, due to intermittent loading, the actual factor of safety is several times the apparent values.

††"SS" means Single Strength; "DS" means Double Strength; both apply to Window Glass.

tapestry® and rough plate glass

Tapestry Glass

A translucent, semi-opaque, rough-figured glass, TAPESTRY Glass is ideally suited for such uses as office partitions, room dividers and similar applications where the architect desires to glaze so as to admit light but obstruct the view. Objects placed quite close to the surface of TAPESTRY Glass can be seen through it almost as plainly as through transparent glass. However, objects decrease in visibility and eventually become entirely shadowed and obscured when they are removed from close proximity to the glass.

TAPESTRY Glass is furnished with both surfaces in tapestry finish, or one in TAPESTRY finish and the other polished. It can be decorated by sand-blasting, chipping or mitering. See "Check List" on page 3 for further details.

Rough Plate Glass

This is glass with a knurled surface pattern which is not transparent, but has a translucent quality. Under normal conditions, objects placed more than a few feet away from the glass will appear as vague images. Objects placed closer than this may be seen clearly enough to identify, but without detail. Its uses include partitions, obscured windows and door panels, skylights (tempered), table tops, roofs (tempered), shelves, modern furniture, trays.

Effective use of Rough Plate Glass is evident in the interior office partitions of Skidmore, Owings & Merrill, New York City. Rough Plate Glass permits light to enter, but assures privacy. Architects: Skidmore, Owings & Merrill, New York City.

solex® heat-absorbing glass

SOLEX Plate Glass absorbs heat without significant interference with light transmission. Although it transmits from 70% to 75% of the sun's total light, it admits less than 45% of the total solar heat. (Clear glass admits 85% of the sun's total heat and light.) Thus, SOLEX greatly reduces the heat entering a building through windows and skylights. Interiors are more comfortable, and persons sitting near SOLEX windows experience less discomfort from solar heat. The glare resulting from high light intensity is considerably lessened.

Wave lengths of visible light vary from 400 to 680 millimicrons. Below this range, ultraviolet occurs. From 700 to 2800 millimicrons, infrared or heat rays occur. SOLEX transmits visible light while absorbing a large portion of the infrared.

SOLEX has a faint bluish-green tint. It tends to make other colors appear true. This gives SOLEX a natural light

solargray® plate glass

A neutral gray Plate Glass, SOLARGRAY possesses essentially the same solar heat-absorbing ability as SOLEX. However, the visible light transmission of SOLARGRAY has been made substantially lower than that of SOLEX in order to provide a greater degree of brightness attenuation. SOLARGRAY meets the requirements as defined in Federal Specification DD-451a (December 19, 1949) for heat-absorbing glass: ". . . one whose polished specimens ¼" thick shall have a luminous transmittance of not less than 0.65 (65%) and a *radiant transmittance for energy* from the sun of not more than 0.50 (50%) . . ."

Because of these properties, SOLARGRAY is recommended for installation where brightness and glare control are desired. Furthermore, it permits this control without sacri-

At Galveston Wharves, Galveston, Texas, SOLARGRAY Plate Glass surrounds the clear HERCULITE® Tempered Plate Glass Doors. This results in an attractive entrance, as well as a functional one. Like SOLEX, this glass reduces the annoying heat and brightness of the sun. Architect: R. R. Rapp, A.I.A., Galveston, Texas.

GLAZING INSTRUCTIONS—HEAT-ABSORBING PLATE GLASS

Any light of annealed glass which absorbs more than 40% of the incident solar energy must be given special care in cutting and installation to avoid temperature-stress breakage. The ability of annealed Heat-Absorbing Plate Glass to resist solar energy breakage is primarily re-

quality which corresponds to artificial light from advertised daylight bulbs. It is neither depressing nor glaring.

In southern and western exposures, SOLEX has many advantages because of its low rate of heat transmission. It is highly recommended for schools, residences, hotels, plants and office buildings. It is ideal where delicate electronic instruments and sensitive manufacturing processes are involved.

21/64″ Heavy Rough SOLEX Plate Glass is also available.

SOLEX Green-Tint, Heat-Absorbing, Glare-Reducing Glass was prominently utilized in the large glass areas which form an important part of the curtain wall of the administrative offices of the Ford Motor Company in Dearborn, Michigan. Architects & Engineers: Skidmore, Owings & Merrill, New York City.

SOLAR ENERGY TRANSMISSION AT NORMAL INCIDENCE FOR ¼″ SOLEX

	Pct.
Luminous (Visible) Transmission of Solar Light	73.0
Infrared Transmission	20.0
Direct Transmission of Total Solar Energy	44.0
Solar Energy Reflected	5.1
Sum	49.1
Absorbed (by difference)	50.9
Total	100.0
Total Direct Transmission	44.0
Re-radiation and Conduction of Absorbed Energy to Inside of Enclosure as % of Total Incident	25.45

See "Check List" on page 3 for additional data.

ficing heat-absorbing ability or creating color problems.

This Plate Glass has wide application in factories, hospitals, schools, apartments, private residences . . . in industrial, commercial and public buildings of all kinds.

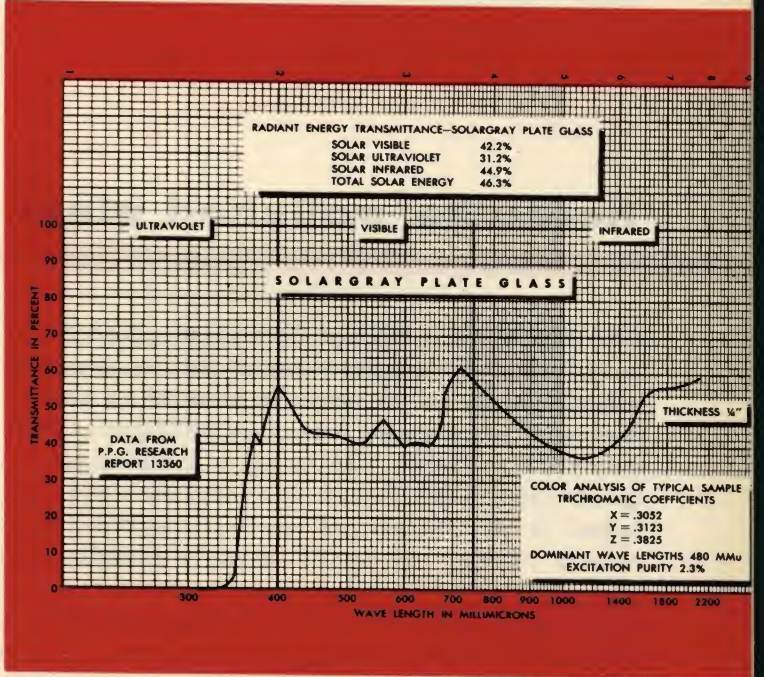
It is not recommended where high light transmission is desired, as, for example, in merchandise display windows, nor in airport control towers or in "sky-rooms" like the "Top of the Mark" where the ability of visitors or workers to see out at night is an important requirement.

The properties of SOLARGRAY Plate Glass are approximately the same as for SOLEX, except for light transmission as indicated in the table below.

21/64″ Heavy Rough SOLARGRAY Plate Glass is also available.

	¼″	⅜″
Total visible solar light	42%	27%
Total solar energy	46%	34%
Total solar infrared	45%	34%
Total solar ultraviolet	31%	22%

See "Check List" on page 3 for maximum sizes and additional specifications.



(SOLEX Plate Glass and SOLARGRAY Plate Glass)

lated to edge strength. Clean-cut edges are the strongest attainable. Glazing details, materials and procedures must protect Heat-Absorbing Glass edges against damage during installation and in service. For detailed glazing instructions, call your Pittsburgh Plate Glass distributor.

pittsburgh mirrors

There is a quality Pittsburgh Mirror for every architectural need, whether for structural use in a building or purely for decoration.

Pittsburgh Mirrors are made from superior *Twin-Ground* Plate Glass, produced by a special new *Pittsburgh* twin-grinding process. The use of this glass results in Mirrors with distortion-free reflection—the most accurate image a modern Mirror can give.

All Pittsburgh Mirrors are available in clear *Twin-Ground* Plate Glass. For achievement of striking or unusual effects, Pittsburgh Mirrors may also be obtained in SOLEX® Plate Glass, which gives them a cool aquamarine color. Both types of Mirrors are consistently high in quality and offer superior reflectivity.

Copper Back Mirrors

Pittsburgh Copper Back Mirrors were developed to meet the demand for Mirrors which have high resistance to deterioration. They should be used for the most effective protection against the usual effects of varying climatic and atmospheric conditions.

These Mirrors are manufactured with a layer of copper electroplated over a heavy coat of silver. With the special copper coating to protect them, the Mirrors retain their beauty and usefulness year after year—practically eliminating the need for replacements.

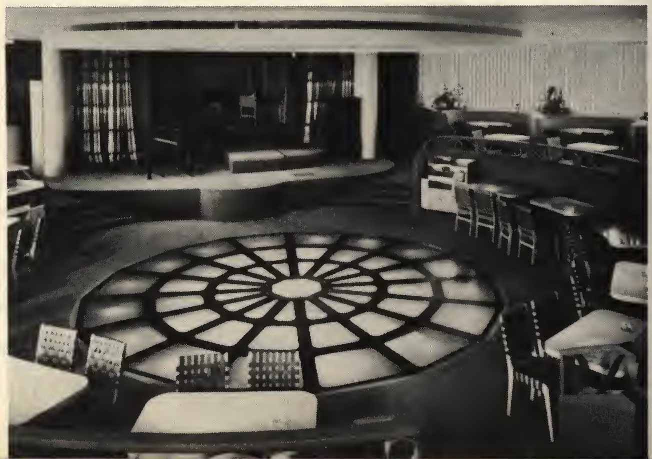
When Pittsburgh Mirrors are to be "built in," they should be specially fabricated for use with mastic. These structural Mirrors differ from other types in that they have an additional protective coating of copper over the regular silver backing.

A handsome structural Mirror, made from Pittsburgh Plate Glass, adds to the charm of any room—whether in a home like this or in a commercial, industrial or other type of establishment. Mirrors help give the illusion of greater spaciousness.

herculite® polished plate glass

This Plate Glass is Polished Plate Glass, subjected to a special tempering process. Wherever mechanical strength and comparatively light weight are essential, or wherever temperatures between 120 degrees and 550 degrees Fahrenheit are encountered, HERCULITE is recommended. Its greater strength will support four times the weight supported by ordinary glass. It will bend four times as far without breaking. Its impact resistance is eight times greater. HERCULITE also resists shocks and impacts as well at 15 degrees below zero F. as at ordinary temperatures. When, under terrific impact, HERCULITE does shatter, it disintegrates into innumerable blunt-edged, small fragments and not into sharp fragments like ordinary glass.

Where strength and safety are important, the uses of HERCULITE are almost limitless. It is exceptionally applicable for aquaria, cell doors, deck lights, doors, fire screens, flooring, gas cooker doors, glass-bottom boats, gauge guards, kitchen equipment, laboratory equipment, partitions, port lights, road traffic signs, shelves, showcases, sight glasses, table and dresser tops, underwater lights, to name but a few. See "Check List" on page 3 for additional characteristics.



Pittsburgh's HERCULITE can be used for many practical and decorative applications. As shown here in The Club, Birmingham, Ala., dance floors made of HERCULITE set in unique geometric patterns have a smooth surface for pleasant dancing. This glass is easily cleaned and remains eye-appealing at all times.
Architects: Warren, Knight and Davis, Birmingham, Ala.

For further details on Pittsburgh Mirrors, see "Check List" on page 3.

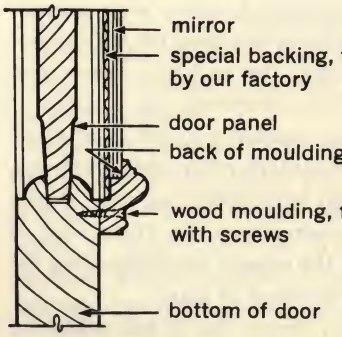
Pittsburgh Full-Length Door Mirrors

There is a great demand for these easily installed Door Mirrors in the home. Many architects now include them in plans for bedrooms, bathrooms and entranceways.

To determine which of the five standard Door Mirror sizes is needed, simply measure the distance from edge to edge of the door itself. This over-all width determines which size Mirror will cover the recessed door panel.

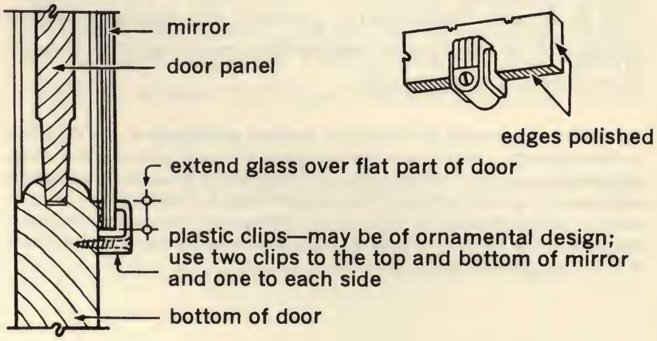
DOOR WIDTH	MIRROR SIZE venetian or framed
2′	16″ x 68″
2′2″	18″ x 68″
2′4″	20″ x 68″
2′6″	22″ x 68″
2′8″	24″ x 68″

NOTE: These Mirrors are all 68″ high and are made to fit correctly all standard interior residential doors of 6′8″ (80″) in height. Mirrors for doors other than standard heights can be fabricated by your nearest Pittsburgh Plate Glass Company branch or distributor.


mirror
special backing, fastened to moulding by our factory
door panel
back of moulding stained
wood moulding, fastened to flat part of door with screws
bottom of door

Note: Remove door from hinges and install mirror when door is in horizontal position

Installation of factory-framed mirror on wood door


mirror
door panel
edges polished
extend glass over flat part of door
plastic clips—may be of ornamental design; use two clips to the top and bottom of mirror and one to each side
bottom of door

Installation of venetian mirror on wood door

carrara® structural glass

CARRARA Structural Glass is made by the same process as quality Plate Glass. Metallic oxides provides opacity and color. It has the same general characteristics as Plate Glass. Thus, it is impervious to moisture, stain, fumes, gases, chemicals and pencil marks. The polished surfaces of CARRARA have the smoothness, brilliance and substantial optical flatness of Polished Plate Glass. It can be heat-strengthened or fully tempered.

In building construction, interior decoration, furnishing and industrial production, CARRARA Structural Glass has many uses. It has found unlimited applications in the spandrel area of buildings of all types. It has been widely utilized in hospital operating and X-ray rooms, as well as in industrial plants and commercial establishments, such as restaurants, hotels, and department and retail stores of every kind. CARRARA is available in ten colors, including black and white, in thicknesses, depending on color, from ¼″ to 1¼″.

For further details, see the "Check List" on page 3, and for complete information, see Section 13e in Sweet's Architectural File.

Forest Green Rough CARRARA spandrels, together with TWINDOW® Insulating Glass, Polished Plate Glass and PENNVERNON® Window Glass are the elements that form this complete curtain-wall system. The structure houses The Cleveland Institute of Art in Cleveland, Ohio. Architects: Garfield, Harris, Schafer, Flynn & Williams, Cleveland, Ohio.

spandrelite® glass in color

SPANDRELITE is a heat-strengthened glass, with ceramic color fused to the back, specifically designed for the curtain-wall spandrel. This glass offers the architect a new and greater latitude in design. For in SPANDRELITE, a galaxy of colors has been added to the timeless properties of glass. The attractive colors of SPANDRELITE retain their freshness, impression of depth, original brightness and true shades indefinitely. In building construction, the color side of SPANDRELITE is mounted to the interior which provides the additional protection of 1/4″ or more of glass.

SPANDRELITE is *strong*. This means that it will withstand impact and a wide range of temperature variations, even within one piece.

It is *durable*. SPANDRELITE provides the ageless qualities of glass. It is resistant to weathering and corrosion, is non-porous and non-absorbent.

It is *economical*. It may be installed in the same manner as regular glass, and it is easily cleaned.

This glass is recommended as facing material not only for spandrels but also for all opaque surfaces of glass-clad

An excellent example of functional modern architecture, the City Hall in New Orleans, Louisiana, makes extensive use of glass for the vision and spandrel areas. Pittsburgh's SPANDRELITE Glass in Color adds a new-found beauty to the exterior, provides a "glass skin" that is exceptionally strong, durable and weather and corrosion-resistant. Architects: Goldstein, Parham & Labouisse, and Favrot, Reed, Mathes & Bergman, New Orleans, La.

pennvernon® window glass

This is window glass at its best—high-quality glass with an unusually brilliant, unmarred finish on both sides of the sheet. PENNVERNON is distinguished by remarkable permanent transparency, clarity, and clear, true vision, accurately transmitting colors of objects seen through it. Manufactured by a special process, it is drawn vertically and held to a flat surface from molten state to finished sheet. No rolls or foreign substances touch the surface of the glass until it has cooled sufficiently to be beyond injury.

Much time, money and research have been devoted to reducing the effects of wave and distortion on the visibility and appearance of PENNVERNON. Because the glass is drawn vertically, under controlled conditions, wave is reduced to a minimum and runs in a straight line. For best visibility and appearance, PENNVERNON should be glazed with the wave running horizontally. When PENNVERNON is ordered, list the horizontal dimension first; for a 40″ wide by 20″ high sash, order glass 40″ x 20″ instead of 20″ x 40″. The factory will then cut to specification and mark the box accordingly, so the wave direction can be kept parallel to the ground when openings are glazed. See "Check List" on page 3 for further details.

PENNVERNON 7/32″ SOLEX® Heavy Sheet Glass should be used when it is desired to reduce heat and glare transmitted by regular heavy sheet glass. It eliminates almost two-thirds of the ultraviolet rays of sunlight which cause fading of fabric colors; reduces sunlight glare to approximately 75%; absorbs more than 50% of the total sunlight heat; conforms in every way to Federal Specifications No. DD-G-451a.

Classification	Qualities Available	Approx. Thickness*	Wts. Per Sq. Ft.	Maximum Size
Photo	A, B	.058″ to .068″	12 to 14	3′0″ x 4′2″
Picture	A, B	1/16″ (.070″ to .080″)	16	3′0″ x 4′2″
Single Strength	Same	3/32″ (.087″ to .095″)	19	3′4″ x 4′2″
Double Strength	Same	1/8″ (.118″ to .133″)	26	5′0″ x 6′8″
3/16″ Heavy Sheet	A, B	3/16″ (.187″ to .200″)	40	10′0″ x 6′4″
7/32″ Heavy Sheet	A, B	7/32″ (.212″ to .225″)	45	10′0″ x 6′4″
Solex 7/32″		7/32″ (.212″ to .225″)	45	8′4″ x 6′4″
Greenhouse	Greenhouse	1/8″ (.118″ to .133″)	26	16x18, 16x24, 18x20, 20x24

*to nearest common fraction

buildings. It comes in Polished or Twill finishes.

Since SPANDRELITE is available in heat-strengthened only, it should not be cut after firing. It has approximately twice the impact and thermal shock resistance of the annealed base glass. Other physical properties, except light transmission and degree of flatness, are essentially the same as those of the base glass. See "Check List" on page 3 for further details.

Eighteen standard colors are available in ¼" Plate Glass. These colors range from Horizon to Graphite, as well as Black and White. A wide range of custom colors can be made to specification. As in color selection, other surface textures will be available to specification. See "Check List" on page 3 for maximum sizes and additional data.

NOTE: With the development of the PITTCO® 82-X bar framing members, architects now have a *complete* system of glass-clad curtain-wall construction from *one* source: Pittsburgh Plate Glass Company. For complete information on *Pittsburgh Glass-Clad* Curtain-Wall Systems, see our catalog in section 3e of Sweet's Architectural File.

The new addition to Our Lady of the Lake School, Seattle, Washington, was designed with a "wall of glass" of SPANDRELITE in combination with PENNVERNON Heavy Sheet Glass. The result is a structure of striking appearance and unrestricted view of the exterior. Architect: Roger Gotteland, A.I.A. and Associates, Seattle, Washington.

pennvernon® graylite$^{\text{T.M.}}$ glass

In answer to architects' requests, a new sheet glass product has been developed to meet the need for glass to help control light environment. PENNVERNON GRAYLITE Glass is the result of a long-range research program to provide economical brightness control for building construction wherever glare is a problem. It accomplishes this, in varying degrees, by reducing the amount of visible light transmitted through the windows.

PENNVERNON GRAYLITE Heavy Sheet Glass and Window Glass maintain the highest standards of recognized PENNVERNON quality. They have a pleasing neutral color which is completely undetectable to building occupants under most circumstances. This means that architects have complete freedom of choice when planning the interior decorating schemes of buildings where PENNVERNON GRAYLITE Glass is used.

	Thickness	Maximum Size	Weight Per Sq. Ft.	Color	Visible Light Transmittance	Radiant Energy Transmittance
PENNVERNON GRAYLITE "61" Heavy Sheet Glass	3/16"	120" x 84"	40 oz.	Neutral	61%	74%
PENNVERNON GRAYLITE "56" Heavy Sheet Glass	7/32"	120" x 84"	45 oz.	Neutral	56%	71%
PENNVERNON GRAYLITE "31" Window Glass	1/8"	60" x 84"	26 oz.	Neutral	31%	59%
PENNVERNON GRAYLITE "14" Heavy Sheet Glass	7/32"	60" x 84"	45 oz.	Neutral	14%	45%

twindow® insulating glass

Twindow Insulating Glass has proved its many advantages in thousands of residential, commercial, industrial and public buildings throughout the United States. This *twin-glass*-air-space sandwich, applicable to any window of a house or commercial building, combines the thermal insulation of storm windows with the prime window as a single unit . . . installs like a single piece of glass . . . cleans like a single pane. No storm windows are necessary, because it is "storm sash" in permanent form. The insulating air space works year-round, reducing heat loss during the heating season and heat gain during the air-conditioning season. Only about half as much heat is lost or gained through Twindow as through single glazed windows.

Thus, windows glazed with Twindow Insulating Glass reduce heating and cooling costs. By reducing the load smaller capacity heating-cooling equipment may be adequate and cost less to operate too.

Twindow's insulation reduces the tendency for condensation to form on the room side glass surface, and unless conditions are unusually severe, window frost will not form. Twindow reduces cold downdrafts at windows, cuts down the "cold shoulder" effect, helps to maintain uniform temperatures, thereby adding to comfort.

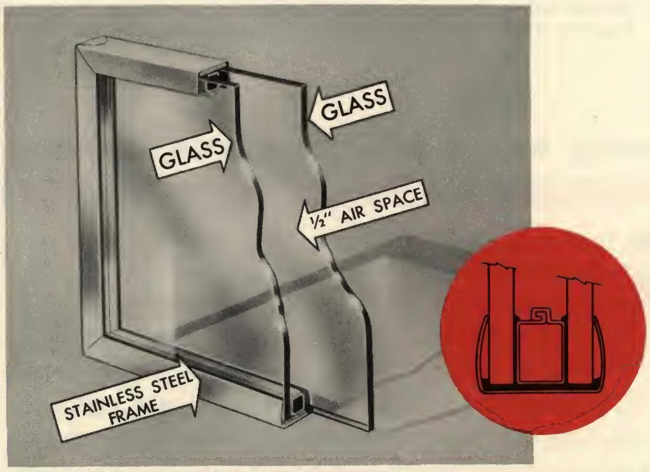
(Right)

TWINDOW units helped to achieve impressive originality in the designing of the Irwin Union Bank and Trust Company Building, in Columbus, Indiana. These window units, with insulation built in, were used for all exterior glazing. Architects: Eero Saarinen & Associates, Bloomfield Hills, Michigan.

(Extreme right)

In homes of all kinds, TWINDOW Insulating Glass brings the beauties of the outdoors indoors; keeps rooms more comfortable winter and summer; eliminates the need for storm windows; saves on fuel bills. Architect: George B. Savage, Grand Rapids, Michigan. Builder: Richard D. Brooks, Grand Rapids, Michigan.

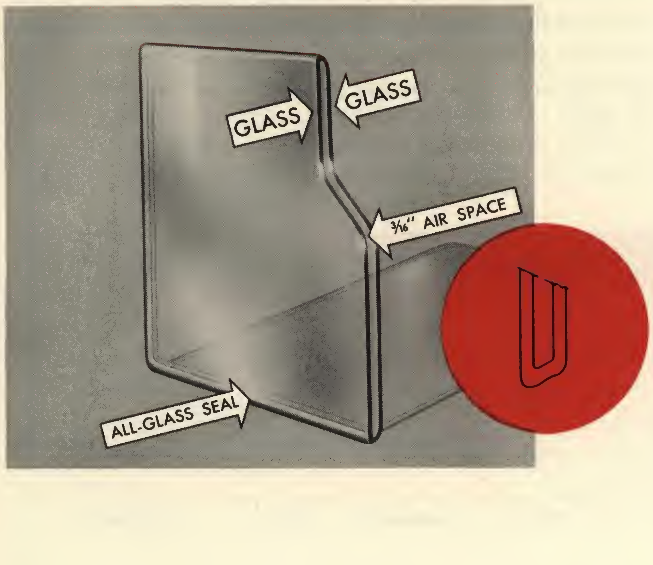
two types of twindow



metal edge

This type is designed primarily for residential "picture" windows, or for medium to large-size windows for commercial buildings. Twindow—Metal Edge units are completely prefabricated and consist of two or more panes of glass enclosing a small, hermetically sealed air space. Rectangular metal tubing separates the pieces of glass. The entrapped air is at atmospheric pressure. It is dehydrated initially by means of a drying agent in the spacer tubing.

The entire edge of each unit is encased in a stainless steel channel. This channel protects the seal, as well as the edges of the glass, during handling and installation.



glass edge

This unit is the only electrically fused, all-glass insulating windowpane, with glass-to-glass sealed edge. Twindow—Glass Edge is ideal for window-wall construction. It is composed of two panes of double strength A-Quality Pennvernon Window Glass (⅛″ thick), separated by a 3/16″ air space. This unit is as easy to install as a single pane of glass. Twindow—Glass Edge insulating units are available in 70 standard sizes. Non-standard sizes are obtainable in minimum quantities of 500 of a size.

GLASS AND AIR SPACE. Made up of two pieces of DSA Pennvernon Window Glass—3/16″ air space—7/16″ over-all thickness.

PORE SEAL. A slate gray ¼″-diameter spot appears near one corner of each Twindow—Glass Edge unit. This is the pore seal, and care should be taken not to damage it in handling, glazing and service.

The glass used in standard TWINDOW—Metal Edge units is Polished Plate Glass or PENNVERNON® Window Glass. For special purposes, other types of glass may be used:

1. Where day-long sunshine, unusual glare or extreme heat is a problem, SOLEX® Green-Tint Heat-Absorbing Glass, or SOLARGRAY® Neutral Gray Plate Glass, and Regular Plate Glass are recommended. Such combinations reduce the transmission of solar heat.
2. DUPLATE® or DUOLITE® Safety Glass. This combines thermal insulation with the safety of laminated glass.

AIR SPACES. Approximately ¼″or ½″. Rabbet width and glazing limitations usually determine air space dimension.

SHAPES. Only flat TWINDOW—Metal Edge units are being manufactured. Most straight-edge patterns are available; even units with radius corners, if quantities are large.

Glazing Instructions

1. Prepare square, in plane openings, free of glazing obstructions. Metal or wood sash and frames must be adequate to support the weight of TWINDOW and to prevent twisting stresses. TWINDOW must literally float in the opening to avoid breakage—especially in large units.
2. Bed the glazing rabbet with only a moderate amount of glazing compound to permit easy positioning of the unit.
3. Place along the bottom rabbet two treated wood setting blocks—each 3″-4″ long and located ¼″ of the width in from each end of the TWINDOW.
4. Ease the TWINDOW into the rabbet on the setting blocks and press it firmly against the bedding compound.
5. Fill the voids around the edges of the TWINDOW unit, apply face-glazing compound and set the stop.*

*Special TWINDOW wire-glazing clips are available for ½″ units glazed in operating metal sash.

**Glazing Instructions*

1. Each unit should be installed with the pore seal at one of the top corners.
2. Use glazing stops, where possible, to avoid steep face-glazing compound angles.
3. Use elastic glazing compound or other material that retains some resilience permanently. Do not use putty.
4. Completely bed all units with compound, making sure in advance that adequate edge and lateral clearances are present.
5. Use two (only) 3″-long wood setting blocks which have been previously treated with preservatives. Each block should be located ¼″ of the width in from each end of the unit and be at least as wide as the TWINDOW—Glass Edge unit is thick.
6. Space units glazed in metal sash properly, to avoid metal-to-glass contact.

*More detailed glazing instructions will be supplied.

Insulating Value of Twindow Compared to Single Glass
(Data applicable to both types of TWINDOW)

Type Glazing	Glass Thickness	Air Space Thickness	"U"* Value	Savings in Heat Transfer Over Similar Area Single-Glazed with Same Thickness Glass
Single	⅛″		1.14	
	¼″		1.12	
TWINDOW—Metal Edge	⅛″	¼″	.63	45%
	¼″	¼″	.61	46%
	⅛″	½″	.57	50%
	¼″	½″	.55	51%
TWINDOW—Glass Edge	⅛″	³⁄₁₆″	.67	41%

*"U" Value is the amount of heat, expressed in BTU's, which will pass through one square foot of window area per hour for each degree Fahrenheit temperature difference between air on the inside and air on the outside. (Values shown are based on 70° F. temperature inside, 0 mph wind velocity; 0° F. outside, 15 mph wind velocity.)

USES. Residential Picture Windows and Operating Windows. Store Fronts. Commercial, Industrial and Institutional Building Glazing. Refrigerated Display Cases. Air-Conditioned Railroad Passenger Car and Bus Glazing. Special Low-Temperature Test Chambers. House Trailers. Sliding Doors.

twindow® insulating glass (cont'd)

dimensions:

metal edge

Glass Thickness †	Air † Space	Max. Area Sq. Ft.*	Dimensional Tolerances	Unit Thickness ¼" Air Space	Unit Thickness ½" Air Space	Approx. Average Net Weights Per Sq. Ft.
⅛"	¼" or ½"	12	To 48" +1/16", −1/16" Over 48" +⅛", −1/16"	17/32" ±1/32"	13/16" ±1/32"	3½ lbs.
3/16"	¼" or ½"	22	To 48" +⅛", −1/16"	11/16" ±1/32"	15/16" ±1/32"	5¼ lbs.
¼"	¼" or ½"	70 50 (Solex®)	Over 48 +3/16", −1/16"	13/16" ±1/32"	11/16" ±1/32"	7 lbs.

*Minimum size, 28 actual united inches.

† Glass thickness and air space are subject to practical manufacturing tolerances.

glass edge

Glass Thickness	Air Space	Max. Area Sq. Ft.	Dimensional Tolerances	Unit Thickness	Approximate Average Net Weights Per Sq. Ft.
⅛"	3/16"	12	±1/16"	7/16" ±1/32"	3½ lbs.

standard sizes:

metal edge

Twindow—Metal Edge units are available in 60 standard sizes, which when reversed, width and height, make in effect 120 sizes. The sizes listed here apply only to a construction of two pieces of ¼″ Polished Plate Glass, with a ½″ air space:

33"x76¾"
35½"x36"
35½"x48⅛"
35½"x60⅜"
36"x44½"
36"x55¼"
36"x68¾"
36"x75"
36"x93"
42"x66"
42"x72"
44½"x48⅛"
44½"x60⅜"
45"x76¾"
45⅜"x52"
46"x48½"
46"x64½"
46"x72½"
46⅛"x52½"
46⅛"x56½"
47⅞"x50⅜"
47⅞"x66⅝"
48"x48"
48"x60"
48"x72"
48⅛"x55¼"
48⅛"x68¾"
48⅛"x75"
48⅛"x93"
48½"x50"
48½"x58"
50"x56½"
50"x64½"
50"x72½"
50"x80½"
50"x96½"
50⅜"x60¼"
52½"x58⅛"
52½"x70⅛"
55¼"x60⅜"
56½"x58⅛"
56½"x66"
56½"x70⅛"
57"x76¾"
58"x64½"
58"x72½"
58"x80½"
58"x96½"
58"x116½"
60"x72"
60¼"x66⅝"
60⅜"x68¾"
60⅜"x75"
60⅜"x93"
64½"x66"
66"x72½"
66"x84"
66"x96"
72"x84"
72"x96"

SPECIAL STANDARD SIZES FOR "WINDOW WALL" CONSTRUCTION

Not reversible—Width (W) and Height (H)

2 Pieces ⅛" PENNVERNON® Window Glass—¼" Air Space
45½"(W) x 25½"(H) 42½"(W) x 22½"(H)

2 Pieces 3/16" PENNVERNON Window Glass—½" Air Space
45⅜"(W) x 52"(H)

2 Pieces 3/16" PENNVERNON Window Glass—¼" Air Space
For Economy Sliding Doors
33"(W) x 76¾"(H) 34"(W) x 76"(H)
45"(W) x 76¾"(H) 46"(W) x 76"(H)

pittco® sliding glass doors

Beauty, freedom and open vision can be added to any residential or commercial structure with Pittco® Sliding Glass Doors. They are made for either single glass or Twindow Insulating Glass.

Pittco Sliding Glass Doors are top-quality units that meet the highest standards of workmanship and finish throughout. The doors roll on stainless steel ball bearing bronze sheaves that assure greater strength, quiet, smooth operation and long, trouble-free service. All exposed aluminum is treated with pleasing, lustrous Alumilite.

For added convenience and comfort in the summer months, provision is made for screens, which slide on a track provided in the threshold. All screens are fitted with a new-type latch actuated by thumb turn on the inside only.

Strong, rigid construction distinguishes the all-tubular frame of Pittco Sliding Glass Doors. The mouldings are of extruded aluminum. Inter-locking meeting stiles, gasketed with 3-point weathering, make these doors an effective barrier against cold, dust, insects and moisture.

The modest lines and plain surfaces of Pittco Sliding Glass Doors give them a distinctively modern look that fits into any surrounding. The hardware is conservative in design and dependable. Sliding panels are equipped with a sturdy and compact latch actuated by a thumb turn on the inside and a keyed lock on the outside.

(Right)
Sliding Glass doors are being designed into homes and commercial buildings more and more. They may be glazed with various types of single pane Glass, as well as with TWINDOW twin-glass insulating windowpanes.

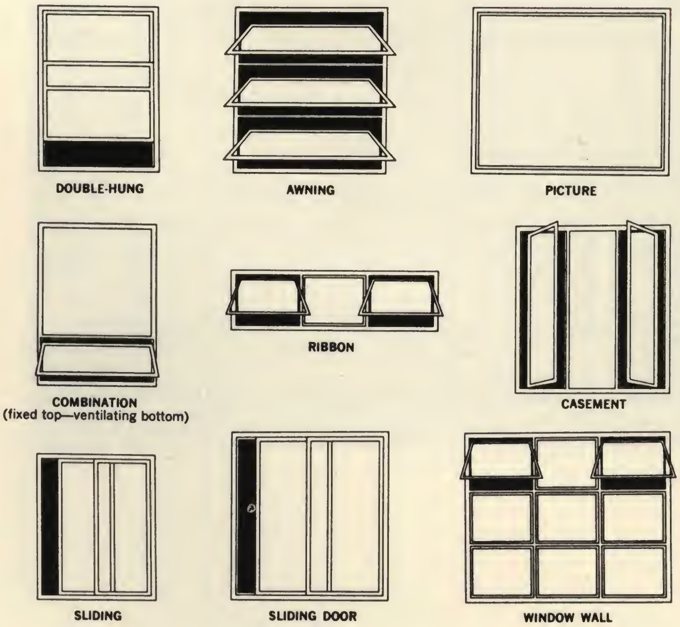
(Extreme right)
Here's an unusual use of Sliding Glass Doors. This installation, in the Eastern part of the country, opens into another room. Thus, clear vision and light are shared between the rooms, with a minimum of noise transference.

glass edge

Constructed of two pieces of ⅛″ PENNVERNON Window Glass with 3/16″ air space. TWINDOW—Glass Edge units are available in 70 standard sizes:

16″ x 24″
16″ x 32″
16″ x 36″
16″ x 48″
16″ x 60″
16⁹⁄₁₆″ x 24⅝″
16⁹⁄₁₆″ x 30¹³⁄₁₆″
16⁹⁄₁₆″ x 36¹³⁄₁₆″
16⁹⁄₁₆″ x 49″
16⁹⁄₁₆″ x 61³⁄₁₆″
19″ x 15″
20″ x 16″
20″ x 20″
20″ x 24″
20″ x 32″
20″ x 36″
20″ x 48″
20″ x 60″
21¹⁄₁₆″ x 24⅝″
21¹⁄₁₆″ x 30¹³⁄₁₆″
21¹⁄₁₆″ x 36¹³⁄₁₆″
21¹⁄₁₆″ x 49″
21¹⁄₁₆″ x 61³⁄₁₆″
22″ x 18″
22″ x 55⁹⁄₁₆″
24″ x 16″
24″ x 20″
24″ x 24″
24″ x 32″
24″ x 36″
24″ x 48″
24″ x 60″
24¼″ x 15¼″
27¼″ x 10¼″
27¼″ x 14¼″
27¼″ x 18¼″
27¼″ x 22¼″
27¼″ x 30¼″
28″ x 16″
28″ x 20″
28″ x 24″
32″ x 16″
32″ x 20″
32″ x 24″
33″ x 21″
34¹¹⁄₁₆″ x 22¹¹⁄₁₆″
36″ x 16″
36″ x 20″
36″ x 24″
36⅝″ x 14¼″
36⅝″ x 18¼″
36⅝″ x 22¼″
36⅝″ x 30¼″
36⅝″ x 49¼″
39⅝″ x 14¼″
39⅝″ x 18¼″
39⅝″ x 22¼″
39⅝″ x 30¼″
39⅝″ x 49¼″
40″ x 16″
40″ x 20″
40″ x 24″
42½″ x 22½″
44″ x 16″
44⅝″ x 14¼″
44⅝″ x 18¼″
44⅝″ x 22¼″
44⅝″ x 30¼″
44⅝″ x 49¼″
45½″ x 25½″

Now—TWINDOW can be used in every window in the house!



herculite® doors and sidelights

Design possibilities with both ½″ and ¾″ HERCULITE Doors are practically unlimited. Sturdiness, strength and endurance are among their outstanding characteristics.

The uninterrupted transparency of HERCULITE Doors allows the interior and exterior architecture of entrances to be harmonized and coordinated. The use of these doors in entrances assures effective daylighting and illumination.

Applied Hardware

The Aluminum, Bronze or Stainless Steel door hardware is cemented to the tempered Glass at the factory. The hardware has been designed to receive top and bottom pivot parts, locks and bolts, and builders' hardware items.

herculite sidelights

These are ½″ and ¾″-thickness Tempered Polished Plate Glass. They are available with or without hardware to match HERCULITE Doors. The maximum glass size is 72″ x 108″. For more complete information, see the "Check List" on page 3, and refer to Sweet's Architectural File, Section 16d.

(Right)
HERCULITE Doors, combined with Polished Plate Glass, give this entrance to the First Security Bank of Salt Lake City, Utah, an open, spacious feeling. Building owners report that such entrances please existing customers and attract new business. Architects: Bank Building and Equipment Corporation of America, St. Louis, Mo.; Associate Architect: Slack W. Winburn, Salt Lake City.

(Extreme right)
This entrance to Berlands, women's shoe store in Memphis, Tennessee, further underscores the effectiveness of **Pittsburgh's** HERCULITE Doors, in combination with Pittsburgh Polished Plate Glass, to help the architect create open-vision designs of immediate appeal and practicality. People like to shop where the atmosphere is "airy" and light. Architects: Benjamin Shapiro & Robert Tisdale, St. Louis, Mo.

herculite door frames

Factory-built HERCULITE Door Frames are manufactured by metal craftsmen to assure highest quality and accurate dimensions. The frames are ruggedly reinforced with steel channels and tie rods. They are constructed of heavy extruded Aluminum, highly polished and anodized; Bronze; Stainless Steel. (Stainless Steel Frames have an appearance similar to Aluminum and Bronze, but are not of extruded metal.)

Pittsburgh HERCULITE Door Frames are equipped with the PITTCO® Checking Floor Hinge, moulding for transom glass, supports for sidelights, strikes for locks, sockets for bolts, and thresholds when specified.

The frames are easy to install since they are supplied as a "packaged unit." The dimensions of the doors, frames and sidelights are coordinated to assure a proper fit. The completed doorways have outstanding appearance, quality features and durable construction.

standard frames

Twelve standard-style frames with heights up to 12′0″ are available to accommodate single doors, a door with two sidelights, or a pair of doors. Four free-standing door frames, for single doors or a pair of doors, are also available for prompt shipment. Standard frames, used individually or in combination, can be installed in most entrances.

This outstanding group of frames is marked by economy of standard frame construction, availability, and ease of design and detailing. When the design of an entrance calls for special sizes and construction, custom frames can be fabricated from all of the standard frame sections and custom sections.

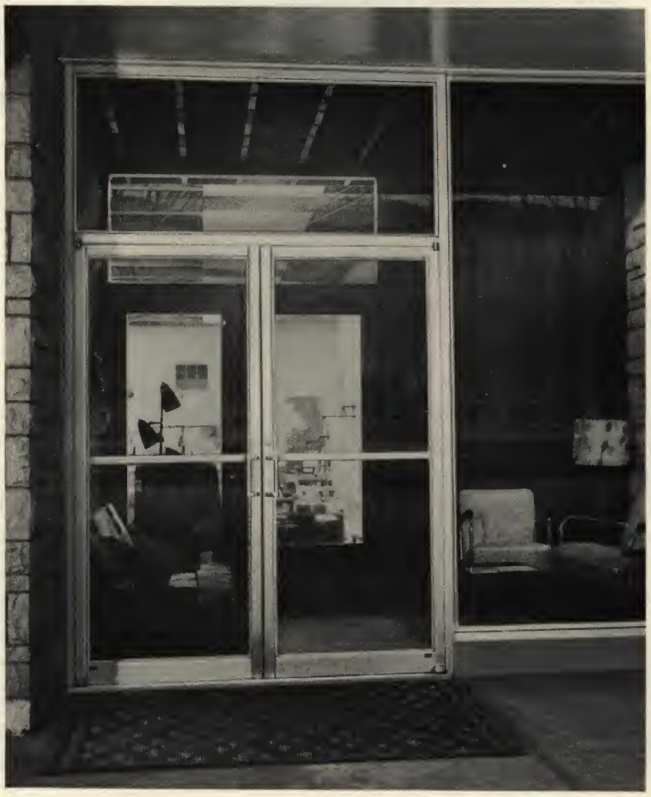
This eye-arresting entrance to Butler's Shoe Store in Memphis, Tenn., features a free-standing HERCULITE Door Frame. A remodeling job, it emphasizes open vision, making the interior one giant display. Architect: E. L. Harrison, Memphis, Tennessee.

tubelite® doors and frames

TUBELITE Doors and Frames represent a distinct advance in hollow metal entrance design. They are fabricated of heavy extruded, hollow aluminum tubes with no exposed seams. Their excellent quality, superb aluminum finish and simplicity of design make them ideal for new buildings and the modernization of old ones.

Qualities

The minimum wall thickness is ⅛″. Anchor brackets at joints and reinforcement for hardware are completely concealed and fastened in place without the fastening method being detectable on visible surfaces. Mechanical joints of doors and frames are accurately milled to a hairline, watertight joint. The glazing member is made to be snapped in, thus eliminating the use of exposed screws. See Section 16a of Sweet's Architectural File for more information.



In the Home Furniture Store, Winona, Minnesota, TUBELITE Doors and Pittsburgh Polished Plate Glass are basic elements of the architectural design. Here, again, is demonstrated the great adaptability of these doors and frames. TUBELITE offers a high-quality product at moderate cost. Architect: Edwin O. Eckert, Winona, Minn.

west tension doors

Narrow stiles and rugged strength make the West Tension Door the quality metal-framed door. Strength is provided by ½″ thick Glass held under compression by a thin metal frame. The frame is drawn together by concealed bolts and compression applied by means of heavy leaf springs in the lower glazing channel. The principle of this new patented door results in a solid unit with increased glass area that can never sag, rack or get out of alignment.

The simplicity of the West Tension Door affords unlimited variations and adaptations in design. Standard or specially designed handles can be applied direct to the Glass for complete open vision. Locks can be in either the top or bottom rails. With center locks, the door can be adapted for almost any type of locking requirement. It is suitable for operation with any type of automatic opening device. Available in clear anodized Aluminum or Bronze, it is moderately priced and completely dependable in operation. For complete information, see Sweet's Architectural File 16d.

pittco® hinge

The PITTCO Checking Floor Hinge is a product of the most advanced engineering and the best manufacturing practices. It can be supplied as a center, safety or offset-pivoted hinge for use with HERCULITE® Doors, West or other similar doors. A retractable top pivot is supplied with the hinge.

Essentially, the operation of the PITTCO Hinge is a combined mechanical and hydraulic action. The closing speed and checking are controlled by hydraulic action regulated by control screws on the top face of the hinge. Every PITTCO Hinge is tested at 300-pounds-per-square-inch pressure to assure that all hydraulic gaskets are properly sealed. The special hydraulic fluid used enables the hinges to perform correctly at the extreme high and low temperatures encountered at varying geographic locations.

PITTCO Hinges are furnished complete with cement case, top pivot assembly, and fittings required to secure a tempered glass door, or similar door, to the hinge.

High-quality roller bearings are used in PITTCO Hinges. Precision workmanship upon the finest metals results in durability, efficiency and trouble-free operation. For complete information, see Sweet's Architectural File 18e.

PITTCO Hinges are available in several types, with or without the hold-open feature, and with a range of spring tensions to satisfy the requirements of almost every entrance.

Before selecting a hinge, analyze the entrance requirements according to the following: 1. Type of door—tempered glass, metal or wood. 2. Center or offset pivot. 3. Single or double action. 4. Hinge-opening action or degree of swing. 5. Hold-open or no hold-open.

pittcomatic® hinge . . . the nation's finest automatic door opener

The PITTCOMATIC Hinge is an automatic door opener operated by a simple, hydraulic, motor-driven unit. It can be used for HERCULITE®, West, TUBELITE® or similar doors. A compact unit, it can be easily installed and maintained.

Operation of a PITTCOMATIC Hinge is very simple. The electrical system is activated either by contacting the door handle or by pressure on a floor mat. When the system is in operation, the power unit pumps fluid to the floor hinge to cause the door to open. The smooth hydraulic action is carefully regulated from start to stop. If the door encounters resistance to opening, the safety valve prevents a build-up of pressure. The closing cycle is free of power and is controlled by the same safe checking and speed controls supplied with manual PITTCO Hinges. When the power is off, the doors can be operated manually. See Sweet's Architectural File, Section 18e, for more information.

Handle Control

The PITTCOMATIC Hinge with push-pull handles is the only automatic door opener for use on double-acting doors. Push-pull handles should be used on entrances having only one door, doors at the building line, or wherever traffic conditions require close control over the door.

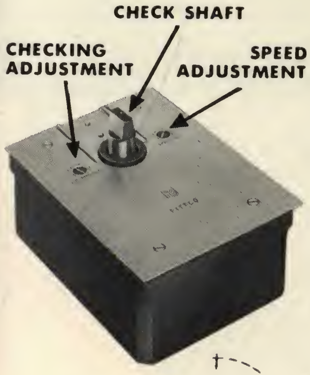
The hinge is activated by a 6V AC spring-loaded contact switch concealed in the handle. A light push or pull on the

pittsburgh glass products

west tension doors

pittco hinge pittcomatic hinge

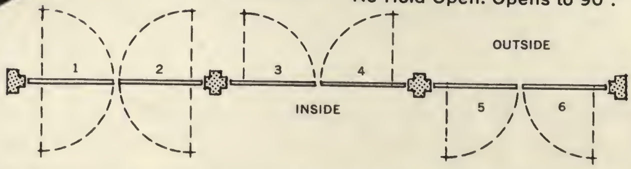
West Tension Doors form the entrance to the Society for Savings, West Hartford, Connecticut. In these doors are combined simplicity of design with structural strength. These doors are extremely adaptable to almost any architectural requirement. Architects: Jeter & Cook, Hartford, Connecticut.



Selection of Type of Hinge

Ten types of PITTCO Hinges are available. Select the type according to entrance requirements.

No. 10-120—Double Acting (Swing 1 and 2) Hold Open at 95°.
No. 10-125—Double Acting (Swing 1 and 2) No Hold Open. Opens to 85°.
No. 10-100—Single Acting (Swing 3 and 6) No Hold Open. Opens to 90°.
No. 10-105—Single Acting (Swing 4 and 5) No Hold Open. Opens to 90°.
No. 10-110—Single Acting (Swing 3 and 6) Hold Open at 95°.
No. 10-115—Single Acting (Swing 4 and 5) Hold Open at 95°.
No. 10-150—Single Acting (Swing 3 and 6) Hold Open at 105°.
No. 10-155—Single Acting (Swing 4 and 5) Hold Open at 105°.
No. 10-180—Single Acting (Swing 3 and 6) No Hold Open. Opens to 100°.
No. 10-185—Single Acting (Swing 4 and 5) No Hold Open. Opens to 100°.



Refer to swing numbers shown above when specifying PITTCO Hinge. Indicate "Swing 3" instead of "Single-acting door opening out."

Models 10-120, 10-125, 10-100 and 10-105 have resistance to opening at 70°. All others have resistance at 90°.

Tension Selection

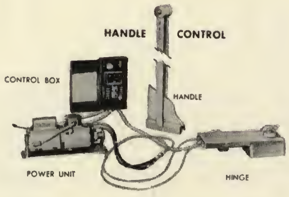
PITTCO Hinges are available with light or heavy spring tension in numbers 2, 4, 6, or 8. Select the tension to satisfy the entrance requirements.

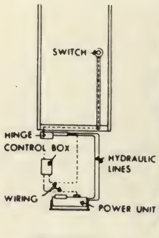
handle opens the door. The push-pull handles control the directional movement of the door at all times.

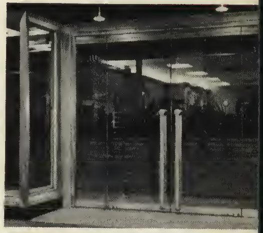
Mat Control

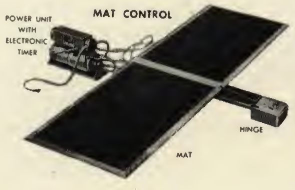
Mat controls are for use on single-acting doors only. The PITTCOMATIC Hinge with floor mat is therefore limited to buildings having both IN and OUT single-acting doors. The mat operation is desirable in entrances to food markets and other buildings where a remote control is preferred.

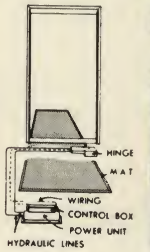
The mat has a lead end at the approach to the door which opens the door away from the pedestrian, and a safety end which holds the door open while he is on the mat. This appeals to a customer with an armful of packages.











pittco® store front metal

PITTCO Store Front Metal is a complete line of glass-holding and decorative members—sashes, sills, heads, jambs, bars, and mouldings. Available in soft, graceful contours, as well as plain, angular design, PITTCO Store Front Metal offers the architect almost unlimited freedom in designing the modern store front.

The PITTCO Store Front Metal line includes both rolled and extruded members. With certain limitations, members produced by both processes can be combined in a single store front with highly satisfactory results.

As complete as the PITTCO line is, it cannot possibly express all the facets of an architect's creativeness. To handle special designs, the PITTCO Store Front Metal plant has facilities for modifying existing members or creating entirely new ones.

With PITTCO Store Front Metal, substantial time savings are realized because setting operations are easily performed. More information about PITTCO Store Front Metal can be had in Sweet's Architectural File, Section 21. For information on 82-X Curtain-Wall Framing System, see Section 3e.

A striking example of the effective use of a **Pittsburgh** open-vision store front, utilizing PITTCO Store Front Metal, is the remodeled Rhodes, Inc., Furniture Store, Burlington, North Carolina. Architect: Charles Kendall, High Point, N. C.

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